

Title (en)
CLEANING SYSTEM AND METHOD FOR OPERATING THE CLEANING SYSTEM

Title (de)
REINIGUNGSSYSTEM UND VERFAHREN ZUM BETRIEB DES REINIGUNGSSYSTEMS

Title (fr)
SYSTÈME DE NETTOYAGE ET PROCÉDÉ POUR FAIRE FONCTIONNER LEDIT SYSTÈME

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Application
EP 19156022 A 20150803

Priority
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Abstract (en)
The invention relates to a cleaning system being configured for cleaning, including fragmentation, debridement, material removal, irrigation, disinfection and decontamination, of cavities (2) filled with a liquid (3). The cleaning system comprises an electromagnetic radiation system and the liquid (3). A treatment handpiece (7) and its exit component (8) are configured to irradiate the liquid (3) within the cavity (2) with the radiation beam, wherein a wavelength of the radiation beam is chosen for significant absorption of the radiation beam in the liquid (3). The electromagnetic radiation system is adapted to generate a first vapor bubble (18) within the liquid (3) by means of a corresponding first pulse (p) and a second vapor bubble (18') within the liquid (3) by means of a corresponding second pulse (p) at a location different to the location where the first vapor bubble (18) is present at the time of generating the second vapor bubble (18'). The electromagnetic radiation system further comprises a feedback system (9) to determine a bubble oscillation intensity. Adjusting means (10) are provided for adjusting the pulse repetition time (Tp) as a function of the determined bubble oscillation intensity. The pulse repetition time (T) is adjusted such, that the onset time (t) of the second vapor bubble (18') is within the first contraction phase of the first vapor bubble (18), when the first vapor bubble (18) has contracted from its maximal Volume (V) to a size in a range from about 0.7 to about 0.1 of the maximal Volume (V).

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Citation (applicant)
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• WO 2013049832 A2 20130404 - BIOLASE INC [US]
• WO 2008149352 A2 20081211 - PIXER TECHNOLOGY LTD [IL], et al
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Citation (search report)
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• [E] EP 2907471 A1 20150819 - FOTONA D D [SI]
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